EXHIBIT E

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UNITED STATES DISTRICT COURT
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                        DISTRICT OF MARYLAND
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     In Re Microsoft Corporation )
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     Antitrust Litigation
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     BURST.COM, INC.,
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              Plaintiff,
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                                         No. JFM 02-CV-2090
          vs.
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     MICROSOFT CORP.,
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              Defendants.
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                  VIDEOTAPED EXPERT DEPOSITION OF
16
                      ROBERT LOUIS STEVENSON, JR.
17
                      TUESDAY, DECEMBER 16, 2003
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                        CERTIFIED COPY
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      REPORTED BY: DIANE M. WINTER, CSR NO. 3186 (1-343658)
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compressed representation without --1 Well, they would be able to understand what I 2 believe time compressed representation means, I guess. 3 But only from the entire section B; is that 4 right? 5 Well, I don't know. If you want me to try and 6 Α parse it out and see what sentences are absolutely 7 8 necessary, I could try to do that. What I'm trying to understand is sort of a 9 . clear concise understanding of the term "time compressed 10 representation." Your client is going to ask the Court 11 to construe that term. And to the extent that they 12 intend to ask the Court to rely on your testimony and 13 your report underneath it, I would like to understand 14 what that definition might be. And if your client 15 intends to ask the Court to enter the entire section B, 16 so be it. But I suspect that's not correct. 17 So let me ask you, is it possible for you to 18 19 give a clear concise definition of time compressed 20 representation as used in the Burst patent? MR. YORIO: And feel free to quote or read from 21 any aspects of the section that you deem appropriate. 22 I guess the shortest way I could 23 THE WITNESS: 24 try to clearly state the definition would be a representation of an audio/video which can be 25

transmitted in faster than real time over some 1 2 communication medium. (BY MR. LEWIS) So is something a time 3 0 compressed representation if it cannot be transmitted 4 5 faster than real time? It would not be considered a time compressed 6 representation if the communication medium you tried to 7 transfer over couldn't transfer it faster than real 8 time. 9 How about if the communication medium could 10 11 only transfer it at real time? Then it would be considered a real time 12 13 representation. Would it be considered a time compressed 14 Q 15 representation? No, it would be considered a real time 16 17 representation. 18 Okay. So what does "representation" mean in this context? 19 In this context it's the information, the data, 20 Α the information structure that is -- contains the image 21 and audio information. 22 Is it correct that a representation is used to 23 refer to how information is convened in a digital form? 24 In the context of how it's used in the claims 25 Α

1 in terms of time compression representation, yes. 2 So if something is a time compressed 3 representation would you characterize that as a thing? It's a collection of data, so I believe it 4 5 would be considered a thing. 6 Okay. So let me make sure I understand what 7 you just testified to. If I take the time compressed representation and I send it over a communications 8 9 medium faster than the view time of that data, its time 10 compressed, it's a time compressed representation, 11 right? 12 Α Can you repeat that? 13 Q I certainly can. If I take the time compressed 14 representation and send it over a communications medium 15 faster than that data's view time, is it correct then 16 that that data is a time compressed representation? 17 MR. YORIO: I'll object to the form of the 18 question. 19 THE WITNESS: I would say it a little 20 differently. I think of it kind of going the other way. 21 If I have a communication medium that provides a certain 22 amount of communication bandwidth, then I could identify 23 what a time compressed representation would be is when 24 it can send faster than real time over that medium. 25 Q (BY MR. LEWIS) So if I have a representation,

1 time compressed representation, and I send it over one 2 medium faster than real time, and I send it over another 3 medium slower than real time, does the representation 4 change? 5 By the representation do you mean the 6 collection of bits or do you mean --7 Yes, how the information is convened in a 8 digital form. 9 Α The representation doesn't change. But when 10 you talk about that representation in context of one 11 communication channel or another communication channel, 12 how you might refer to that representation would change. 13 Now where does your understanding of time 14 compressed representation come from? 15 Α From reading the patents. 16 Q What part of the patents, the specification? 17 I would have to -- show me the patents I can Α 18 point out to what sections, I guess. 19 I'm not asking so much for an exact, you know, 20 column and line. I'm just sort of trying to understand, 21 you know, generally what evidence you looked at. I mean 22 I have the patents, we can look at them now or in a 23 moment, but let me ask it to you this way: Does your 24 understanding of time compressed representation come 25 from the claims of the patents?

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I think of the patents as just one entire thing. I don't try to separate them out in terms of this part and that part in terms of where I got a particular piece from, so I think of the entire patent as what -- as the thing I referred to. Now do you have an understanding of whether the term "time compressed representation" appears in the Burst patents outside of the claims? Α I certainly remember the words "compression" and "compressed." I don't recall if I remember the phrase "time compressed representation." Did the fact that time compressed representation not -- does not appear in the claims affect your analysis of that term? Can you say that again? Α MR. YORIO: Can you repeat that? (BY MR. LEWIS) Does the fact that time 0 compressed representation does not appear outside of the claims affect your analysis of the term "time compressed representation"? MR. YORIO: I'll object to the form of the question. It's not clear -- the witness was not certain whether that term appeared outside of the claims or not. THE WITNESS: Well, as he said, I'm not certain it didn't appear. And if it didn't, it wouldn't affect

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my interpretation. Like I said, I consider the patent as an entire entity, and I read the entire thing, so I wouldn't, I wouldn't try to come up with a different definition for time compressed representation for the claims and for the body of the patents. (BY MR. LEWIS) I see. Does time compressed representation -- sorry, did time compressed representation have an ordinary meaning in 1988? MR. YORIO: Ordinary meaning to whom? MR. LEWIS: To one of skill in the art. MR. YORIO: Thank you. THE WITNESS: Well, I think certainly the words individually all do, all did. Time, compression and representation certainly all had a meaning. And I think when strung together I think they would, you know, indicate to someone a general concept. But I don't know if I would say that someone had, it was a kind of an agreed upon completely uniform definition for everyone. Because it depended somewhat on the application area, the context, how you might string those together. But I think in this area of kind of video communications, audio/video communications, I think someone would have pieced the terms together correctly. 0 (BY MR. LEWIS) In 1988? Α Yes.

What's the basis for that statement? 1 0 2 I was working in the area in 1988 and I think I Α 3 would have understand what the terms, when strung together in that context, would have meant. 4 In 1988 you were working on your Ph.D.; is that 5 6 right? 7 A Correct. 8 Do you have any physical evidence supporting Q 9. your understanding of the term "time compressed 10 representation" from 1988 or earlier? 11 I didn't feel the need to. I thought the 12 evidence in the patent was enough to support what I thought someone would think it meant. So I didn't look 13 14 for anything further. 15 Do you have any intention of looking for Q 16 anything further in the future? 17 If someone asked me to I quess I would. Α But I 18 have no personal intention. 19 Could I ask you to look at your opposition --0 20 or your rebuttal expert report at page 19. I want to 21 ask you about the first sentence in paragraph 61. Why 22 don't you read that sentence to yourself and tell me 23 when you are through. 24 Α Okay. 25 What engineering context are you talking about? Q

A I don't know how to answer that question exactly. I mean I certainly read the patents and came up with my understanding of time compressed representation just by reading the patents. As part of that process, you know, I had — just by reading the patents I felt comfortable with the definition I guess is what I'm trying to say.

I certainly went the next step and read the file histories to make sure that the, you know, in the argument in front of the patent office Burst didn't say anything differently than what was conveyed in the patents, you know, that might change the meaning from what I thought someone would understand. And I didn't find anything in any of this discussion that changed the meaning that I got from the patents. So I didn't need the file histories, but I certainly looked into them and checked out -- checked them out with regards to this term.

- Q Do you understand the term "video time compression" to refer to time compressing video data?
 - A Yes, that's how I would put that together.
- Q In your opposition report at page 15, take a look at paragraph 48. It goes off into page 16 as well.
- MR. YORIO: I'm sorry, could you give me that reference again?

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what way?

trying to reduce the number of bits, it's not clear. Because in the training world where you pretrain stuff the code book is communicated, you know, during the manufacture process when you are building things. So all you need to do in the transmission time is transmit the code, you know, the code words and not the code book. If you talk about doing it optimally and generating the code book for a video you have in, then you have to also not only transmit the code words, but you have to also transmit the code book. So which one of those is particularly optimal for reducing the total number of bits is not clear. Because if your training technique, which is suboptimal in your use of code words, might still use less bits than the optimal code word usage, but requires you to transmit both the code words and the code book. But not in a sort of ridiculous way of doing It depends on the situation, right? Α What's that? 0 I said it depends on the situation which is the best way of doing it? MR. YORIO: I'll object to the form of the question as to vague as to use of the word "best."

1 THE WITNESS: It's context dependent. It's 2 depending on the video, video you have. 3 (BY MR. LEWIS) Which technique, the training Q 4 or the actual code book is better, you mean? 5 The comparison between the two. I mean you are Α 6 kind of asking a fairly abstract question. Without 7 context I don't know how I can answer it. But what do you mean by context? 8 9 Well, it's -- which one is better depends on, Α 10 you know, how well you can characterize your video and 11 the training, how, you know, how big of a code word --12 code book you need to represent the video to the degree 13 you want it represented. It just depends on so many 14 variables that there is not a clear answer. 15 Q Which one is, clear answer to what? I'm Okay. 16 sorry. 17 Α There is not a clear answer if there is a time 18 when generation of the code book is optimal on the fly. 19 Q Does the Burst patent describe lossy 20 compression? 21 Α Yes. 22 Where? Q 23 MR. YORIO: Are you speaking of '995 or any of 24 them? 25 MR. LEWIS: Let's start with the '995.

1 believe the answer is different for one of the other 2 ones please let me know. THE WITNESS: I think it's at least in these 3 first two sections I had circled, I had circled before. 4 (BY MR. LEWIS) Which part? 5 Q Starting at column 4 line 63 going through 6 Α 7 column 5 line 24. 8 Q Which part of that talks about lossy 9 compression? 10 Well, there is no way that -- I mean I could 11 point -- I could start talking about all the technology, 12 but there is no lossless compression technique that can ever compress a 51 gigabytes down to 250 megabytes. 13 14 just doesn't exist in the video world. 15 Q Okay. Let me take a step back and ask you 16 this: Do you have an understanding of CCITT group IV 17 compression? I had a better understanding years ago than I 18 19 do right now. I mean at one time I actually remember 20 reading the spec, but I haven't read it in a long time. 21 Q Well, as you are opining in this case do you 22 have an understanding of whether CCITT group IV is a 23 lossless or lossy compression algorithm? 24 Given that it's kind of in the compression rate Α 25 by 95 percent, it's got to be lossless -- got to be

on statistics of the signal. And you are trying to on average reduce the number of bits is all you can hope for. So that means even though on average you actually, you know, it's provable that you can't reduce the average so that sometimes you actually have more bits when you do the compression techniques.

So, you know, I want to caution you on this.

Because, you know, sometimes, I mean, you actually see like Internet spam like this that, you know, here's a

Because, you know, sometimes, I mean, you actually see like Internet spam like this that, you know, here's a compression technique that will always reduce your data 90 percent and you just keep on applying your data -- you apply the compression technique over and over again and you end up representing your entire hard drive on a

Q I have to say I don't read my spam,

Dr. Stevenson. Let me reask the question a little more specifically then.

floppy or something like that.

Assuming a given bandwidth connection, and assuming that your compression reduces the number of bits or digits, is it correct that such compression will always reduce the transmission time for a given piece of data?

A The transmission time of the original data will be longer than the transmission time of the compressed data, assuming your compression step successfully

1 reduced the number of bits. 2 Okay. Would you turn to your opposition report 0 3 at 19. 4 MR. YORIO: Paragraph 19 or page? MR. LEWIS: Actually page 19. It's paragraph 5 6 61. 7 (BY MR. LEWIS) Where did you get "Apple 8 Computers Demystifying Multimedia"? I assume that's a 9 book. 10 Α Yes. Well, I had -- when we were talking about 11 this time compression I had, as I suggested before, I knew these other contexts where time compression was 12 13 used in a very different fashion. And one of them was 14 this idea that when you do interframe compression, 15 because you are applying a compression technique in 16 time, it's sometimes referred to as temporal or time 17 compression. And that term has been around for awhile, 18 and I've used it that way for awhile. 19 But I didn't have a real source for, you know, 20 an early source for it. I mean I'm sure I could find it 21 pretty quickly in, you know, the '90's when I have 22 searchable indexes. But I explained this kind of 23 concept to the Burst lawyers and they found this book. 24 MR. LEWIS: You know, Mr. Yorio, that book, or 25 at least the relevant portions of it, were not produced.

1 Α Yes. 2 -- you can use all of it, right? There is no 3 one to take it from, right? 4 Well, I mean if it's completely circuit switch from one end to the other end, and you are not worried 5 6 about how you are using resources at either end, then, 7 you know, you could create scenarios where you might do that, yes. You could also create scenarios where that 8 9 wouldn't be a wise thing to do. 10 And why not? 11 Well, for instance, if there is a, you know, 12 limited memory at the end, at the receiving end, if you 13 try to use all the network bandwidth that you can grab you might overflow your buffers on the receiving end 14 15 and, you know, and your ultimate goal of communicating 16 the piece of information wouldn't have been achieved it 17 would have been a stupid thing to do. 18 Q Anything else? 19 MR. YORIO: Objection, it's overbroad. 20 THE WITNESS: Do you want me to make up other 21 examples of how you might not utilize all the network 22 bandwidth? 23 (BY MR. LEWIS) Well, you said you can create Q 24 scenarios where it wouldn't be a wise thing to do. 25 just trying to understand those scenarios.

1 MR. YORIO: I guess he's asking for another 2 example if one comes to mind. 3 THE WITNESS: Another example is, you know, 4 when you are using networks you are using part of your 5 compute cycles. And if you try to maximize your pipe, 6 your usage of their -- your pipe and you try to fill it 7 up completely, you might be starving other processes 8 that need to fill the pipe of computational cycles that 9 needs to fill the pipe. So you may not actually be able 10 to produce the data at a fast enough rate to fill the 11 pipe. 12 (BY MR. LEWIS) In your expert report I believe Q 13 you talk about the Internet. Do you recall that? 14 Α I believe I mentioned it at some point, yes. 15 Is there a mention of the Internet anywhere in 0 16 the '995 or other patents, other Burst patents? 17 Α The use of the word "Internet"? 18 Q Yes. 19 Α I don't recall. 20 You don't recall whether it was there or not or Q 21 you don't recall that it was there? 22 I don't recall whether it was there or not. don't remember specifically searching the patents for 23 24 that word. 25 Q Do you recall whether the Burst patents

1	A It was opaque because up until the break-up of
2	Bell Labs in '84, somewhere around that time frame, the
3	telephone company didn't let anyone know, because it was
4	a monopoly and they wanted to keep it that way. And
5	after that, you know, they started opening it up because
6	they were forced to.
7	And, you know, I became somewhat aware of
8	things when I, you know, for example when I interviewed
9	in '86 at Bell Labs, and I became more aware of it in
10	the early '90's when I started doing, you know, video
11	transmission over the telephone network and over the
12	Internet.
13	Q So would you agree that because the telephone
14	service strike that.
15	Would you agree that because the telephone
16	network provides a particular level of service it
17	doesn't matter what happens behind the scenes within the
18	telephone company?
19	MR. YORIO: Objection to the form of the
20	question. Matter to whom and for what purpose?
21	THE WITNESS: I guess I'm trying to understand
22	your question a little bit better. Can you rephrase it?
23	Q (BY MR. LEWIS) Well, let me take a step back.
24	What's your understanding of the term "circuit
25	switched?"

1	A A circuit switch network is one that provides a
2	fixed bandwidth connection between two points. How it
3	does that, there is different technologies that can be
4	used in implementing that. But that's kind of the big
5	picture, I guess.
6	Q But the relevant criteria is that it's a fixed
7	bandwidth connection no matter how it's implemented?
. 8	A I don't want to say that's the relevant thing
9	from a technical point of view. I think it's more of
10	it, more nuances that are true from the technical point
11	of view. Because saying there is a fixed bandwidth, you
12	know, if you are not utilizing I mean there is a lot
13	of just kind of little nuances of what that means. But
14	I think in general, you know, for our discussion I think
15	that's probably an okay way of thinking about it.
16	Q There is also a characteristic of a circuit
17	switch connection that you connect to one place and your
18	data goes through like a pipe to that one place?
19	A Not necessarily.
20	Q You can have a circuit switch connection to
21	more than one place?
22	A Yes, I believe so.
23	Q How?
24	A Well, there is, you know, concept of
25	broadcasting. And you can just because, you know, in

1	that certainly. I mean you certainly, if you call
2	overseas, you were it was noticeable latency between
3	talking to people. That was the telephone network. Now
4	it was because the number of hops you were doing it was
5	too much latency and it became noticeable. So while
6	they strived they certainly didn't always achieve it.
7	Q Let me make sure I understand a circuit
8	switched connection here. You said it had a fixed
9	bandwidth, right?
.0	A Yes.
1	Q So if I have a known amount of data and I'm
2	sending it over a fixed bandwidth connection, isn't it
3	true that I can calculate my transmission time?
4	MR. YORIO: Objection to the form of the
5	question.
6	THE WITNESS: Your total transmission time,
7	yes.
8	Q (BY MR. LEWIS) Would you agree that the Burst
9	patents disclose a circuit switch connection through
0	their disclosure of a telephone line?
1	A I don't think that was the intention of saying
2	one of the communication mediums was a telephone.
3	Q Well, putting aside the intentions for which I
4	assume now we can only guess, let me ask you, does the
5	specification disclose circuit switched connection when

1	Q Isn't it true that a Tl network, as you
2	discussed before, has a fixed bandwidth?
3	A A T1 network, I don't think that makes
4	technical sense, that phrase.
5	Q I'm sorry, I didn't mean to say network. Isn't
6	it true that a T1 link, as you discussed earlier, has a
7	fixed bandwidth?
8	A Typically you would buy a fixed bandwidth. I
9	think T1 was a 1.5 megabit, somewhere around there.
10	Q Do you have an understanding of what packet
11	switching is?
12	A Yes.
13	Q Could you define packet switching?
14	A Packet switching is just the idea of you put a
15	chunk of data, a packet, on the network and it has an
16	address. And the network is kind of intelligent enough
17	on its own to route that packet of data that you put on
18	the network to the address you specify.
19	Q Does a T1 link have that kind of intelligence?
20	A Well, you are confusing different levels. T1
21	is just a link, it's just a link. It's not the network
22	as a whole. A T1 line by itself does absolutely
23	nothing. You know, talking about the electronics you
24	put on either end that provide the protocols and provide
25	the, you know, whether things act like a packet switch

1	IP over a telephone line?
2	A Yes.
3	Q Isn't it true you can use lots of protocols
4	over a telephone line?
5	A Correct.
6	Q Does a patent anywhere mention an address?
7	A I don't recall that. I'd have to look through
8	the patent again.
9	Q Does the patent, Burst patents at any point
10	strike that.
11	Do the Burst patents at any point mention
12	packets?
13	A I don't recall, but I don't believe so.
14	Q Do the Burst patents at any point mention
15	dealing with sequencing issues of data that arrives out
16	of order?
17	A I don't recall.
18	Q You don't recall whether it does or doesn't, or
19	you don't recall that it does?
20	A I don't recall whether it does or doesn't. I
21	would guess it does not.
22	Q Isn't it correct that in a packet switched
23	network the packets can arrive out of order?
24	A Yes.
25	Q Isn't it correct that on an end-to-end

1 that's a fraction of a bigger pipe. And over that smaller fraction pipe you can send packet information. 2 3 Does the packet patent -- strike that. 0 4 Do the Burst patents at any point describe 5 building a packet switched network on a circuit switched 6 network? 7 Α No. Do the Burst patents at any point describe 8 Q 9 building a circuit switched network on a packet switched 10 network? 11 Α No. 12 Are you thinking about lunch at some point? 13 MR. LEWIS: I am. I'm sort of thinking when 14 you want to do that. Are you hungry? Why don't we take 15 a lunch break then. 16 VIDEOGRAPHER: This marks this end of videotape 17 number two in the deposition of Dr. Robert Stevenson. 18 We're going off the record at 12:12. 19 (Lunch recess taken from 12:12 to 1:14) 20 VIDEOGRAPHER: We're back on the record. And 21 this marks the beginning of videotape number three in 22 the deposition of Dr. Robert Stevenson. The time on the 23 video monitor is 1:14. 24 (BY MR. LEWIS) Good afternoon, Dr. Stevenson. 25 Have you had a nice lunch?

1	seconds. What's the associated time?
2	A Associated time for what?
3	Q For that video.
4	MR. YORIO: Objection, it's vague, incomplete.
5	MR. LEWIS: Let me reask it this way.
6	Q (BY MR. LEWIS) Let's say you have a time
7	compressed representation of some video, okay, and it
8	represents 30 seconds of video. And it's sent to person
9	A in 20 seconds. And it's sent to person B in ten
10	seconds. What's the associated time period
11	A Well, when you
12	Q as understood by the Burst patents?
13	MR. YORIO: Same objections.
14	THE WITNESS: When you are transmitting it
15	to I might get this backwards, but when you are
16	transmitting it to person A, the associated time period
17	is ten seconds. And when you are transmitting it to
18	person B, the associated time period would be 20
19	seconds.
20	Q (BY MR. LEWIS) Okay. And so the same time
21	compressed representation can have two different
22	associated time periods; is that what you are saying?
23	A Well, you've changed the, you changed
24	essentially you have two different structures, two
25	different ways of transmitting. You transmit them at
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1	different rates. So, you know, you've created two
2	different scenarios. So when you change that scenario,
3	though, you change the associated time period.
4	Q And has the data changed, the time compressed
5	representation?
6	A No, the representation hasn't changed, but the
7	apparatus has changed.
8	Are we at a breaking point or
9	MR. LEWIS: Whenever you like. Right now is
10	fine.
11	THE WITNESS: That would be nice.
12	VIDEOGRAPHER: Going off the record at 2:30.
13	(Recess taken from 2:30 to 2:40)
14	VIDEOGRAPHER: We're back on the record at
15	2:40.
16	Q (BY MR. LEWIS) Hi, Dr. Stevenson. Could you
17	turn to your initial report, page four. I want to talk
18	to you about paragraph 13.
19	See that paragraph?
20	A Yes.
21	Q Okay. In this paragraph are you indicating
22	that you are not performing claim interpretation because
23	it is a legal determination?
24	A My, you know, my attempt in this report was to
25	just describe what I thought some of the terms in the

1	Q Okay. Why, if it does, does the fact that the
2	definition is directed at a radio transceiver change the
3	meaning of the term "transceiver"?
4	A Well, I don't have the cite from the dictionary
5	in front of me, anyway. I don't have it in my report.
6	But as I recall the definition, the definition that was
7	quoted in Dr. Von Herzen's report was the transceiver in
8	a mobile radio environment. And I don't see how that's
9	relevant to these particular patents. So the fact that
10	transceiver is used one way in that context, that
11	doesn't mean it means the exact same thing in a
12	different context.
13	Q Do you have anything to point to that shows
14	that transceiver means something different in the
15	context of the Burst patents?
16	_ A Well, I guess I would point to the '705 patent
17	which clearly teaches something in multiple housings and
18	which still calls that apparatus a transceiver.
19	Q And do you have anything else to support your
20	opinion that the transceiver means something different
21	in the context of the Burst patents?
22	A I didn't look for anything else if that's what
23	you mean.
24	Q That was it for you, that's all you know of?
25	A Yes.

1 Do you see that? 2 Α Yes. 3 Okay. Now why does the temporal savings need 4 to be recognizable? 5 Well, I was trying to -- there is this word of 6 approximation "substantially." And I've always been 7 told that you don't ignore any words in the patent 8 claims, so I was, you know, trying to give meaning to it 9 as one skilled in the art would. And so, you know, the 10 rest of the terms that are in there talk about the time 11 period being shorter. So there has to be some 12 recognizable degree of shortening that time, or temporal 13 savings, as I put it. But I forget what Dr. Von Herzen 14 puts in his report, but he went to some extreme number. 15 0 Extreme number of what? 16 Percentage of savings, I believe. Α 17 Q And recognizable to whom? 18 Α The -- recognized to one skilled in the art. 19 Q So it needs to be some recognizable degree of 20 temporal savings to one of skill in the art? 21 Α The way I guess I thought about it was, you 22 know, any system uses some, you know, has some -- any 23 system for communicating, you know, digital video has 24 some apparatus for transmitting and storing the video 25 between the two systems. And I looked at the amount of

1 temporal savings that you needed as a way to somehow, 2 somehow change the kind of the paradigm for how you 3 would construct that device, you know, say the receiving 4 device. 5 That that would be recognizable as something 6 you had to deal with so that would create some sort of 7 change in how you, you know, did things. So that amount 8 of temporal savings that I thought was recognizable was 9 that which caused an engineer to change how he built the 10 systems. 11 Q So let's say you are trying to transmit an 12 hour, 60 minutes of video. 13 Α Uh-huh. 14 And you transmit it in 59-and-a-half minutes. 15 Is that a substantially shorter time period? 16 Well, you know, before, you know, before these 17 ideas came out and before, you know, when people were doing this, before when people were doing this kind of 18 19 real time systems, or at least close to real time 20 systems, you always provided some buffer to deal with 21 the latency in the transmission time. And those buffers 22 ranged in size from ten seconds, 30 seconds, a minute, 23 somewhere like that.

take the upper one. Let's say you had a buffer that

So the fact that you transmitted -- so I'll

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1 time for 60 minutes of video would be substantially 2 shorter, right? 3 I'm saying that would not. But say 55 would. 4 Q Okay. And while 58 would as well, right? 5 Α Yes, yes. 6 Q In fact 58 minutes and 59 seconds would be 7 substantially shorter than 60, right? 8 Α Well, I mean, you know, I don't have a complete 9 . listing of all size buffers that people used. So I 10 don't know if the upper limit is a minute or if it's, you know, 30 seconds or if it's ten seconds. But they 11 12 were on that order. I don't recall ever seeing anything with a bigger receiver buffer than -- you know, as a 13 14 matter of fact I don't remember seeing anything with a 15 minute buffer. I can remember 30 seconds, the times. 16 So, you know, it's somewhere around there, but I'm 17 trying not to give an absolute number, because I don't 18 think there is an absolute number. It's that time that 19 causes you to change how you go about designing these 20 systems. 21 0 Don't all faster than real time systems have to 22 have a buffer? 23 Pretty much all systems have to have a buffer. Α 24 0 Well, true, I suppose. But isn't it correct 25 that you if you are transmitting the data faster than

1 in the context of 1988, is it your understanding that it 2 would refer to a transmission time even a few tens of 3 milliseconds shorter than the play time? 4 Well, this is why I'm hesitant to try to nail 5 down a specific number, which I think is what you are 6 looking for. You know, I think it would have struck 7 different people different way. 8 An engineer at PictureTel who has -- who had 9 typically dealt with buffers in the ranges of tens of 10 milliseconds would have thought of transmitting a video 11 in less than a time that would, you know, cause that 12 buffer to overflow, would think that that was substantially shorter. Whereas an engineer working with 13 14 a different type of technology which had larger buffers, maybe, would see a bigger amount of shortening of the 15 time needed before he would say, oh, that's 16 17 substantially shorter. 18 0 Well, isn't it correct that the video 19 conferencing example isn't really applicable because you 20 can't get ahead of the normal play time because that 21 data is being generated in real time as well? 22 Well, those video conferencing systems were 23 also used to transmit just canned presentations in some

They weren't necessarily all just used for

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sense.

face-to-face communications.

structure, if this is, these structures are commonly well-known and used all over the place.

And I think given the way this is a, kind of a systems patent where are you putting together well-known components and you are just wiring them up and using them in a unique fashion, it's not too surprising that all these input means and the other ones were well-known components. Because that was the idea of using that language, I believe.

Q So is your understanding that the standard is if one of ordinary skill in the art can list structures that would be appropriate for performing the stated function, then the element is not a means-plus-function form?

A I'm not sure what you mean by list structures. I think if it says input means for doing something, and you understand what that function is, and you know a structure that performs that structure that's well-known, then I think that's fine. I don't know if you have to list every possible structure that might be able to perform that function. You don't have to be aware of every possible structure.

Q Could I ask you if you misspoke? You said that -- you said, "I'm not sure what you mean by list structures. I think if it says input means for doing

1 particular structure? What do you mean by particular structure? 2 A single structure or a family of structures? 3 Q Well, those are two different things. 4 Α Okay. Let's start with the single structure. 5 Q Does the claim language identify a single structure? 6 No, it doesn't attempt to identify a single 7 Α 8 structure. Does it identify a group of structures? 9 Q I guess it depends on how you define the 10 Α I consider it identifying the group of input 11 groups. 12 means-type structures, so --Generally it's a group of structures that 13 Q 14 perform the stated function? Correct. 15 Α What that performs the stated function --16 0 17 strike that. 18 Can you give me an example of something that performs the stated function that would not fall within 19 your understanding of the input means element? 20 Can you say that again? 21 22 Sure. Can you give me an example of something 23 that performs the stated function but would not be within your understanding in paragraph 90 of the input 24 25 means.

1	A I would have to go back and read the patent.
2	Q So as you sit here right now you have no
3	opinion?
4	A I don't know.
5	MR. YORIO: Objection, the patent speaks for
6	itself. He said if you want him to look through the
7	patent he'll do so.
8	THE WITNESS: I just don't recall it one way or
9	the other.
10	Q (BY MR. LEWIS) I mean when you did the
11	analysis of the input means in claim 17 you did
12	recognize that it required receiving time compressed
13	representation, right?
14	A Yes.
15	Q And did you then analyze whether or not the RF
16	tuner was capable sorry, was disclosed as receiving
17	time compressed representation?
18	A No, I looked at all the structures that somehow
19	received signals, and I listed those structures that
20	would be able to, you know, someone skilled in the art
21	would know that they could be used for receiving a time
22	compressed representation.
23	Q Is it your understanding that that was the
24	standard applicable?
25	A All the structures that could be I tried to
i	

1	identify all the structures that conform to the stated
2	function that was listed in the listed in the patent.
3	That was my intention.
4	Q I guess I'm just trying to understand. So you
5	tried to find the structures that could perform the
6	stated functions, right?
7	A Yes.
8	Q Did you try to find the structures that were
9	described as performing the stated functions?
10	A I don't recall thinking about it that way.
11	Q All right. Let's move on after claim 17.
12	What's the next claim where there is an input means?
13	A I see claim 18, and I cite the same language as
14	claim 1 above, which is clearly is just talking about
15	the fiberoptic. It's on page 45, the next page.
16	Q Right.
17	A It's just talking about the input means of
18	being a fiberoptic port.
19	Q So is your intention then to limit that claim
20	only to fiberoptic port?
21	A Yes, yes.
22	Q Okay. What's the next claim that has an input
23	means?
24	A It's page 55, which is part of claim, claim 30.
25	Q Okay. And what is the corresponding structure

1	skill in the art conventional digital circuitry and/or
2	software for compressing audio/video data into a time
3	compressed representation." Do you see that?
4	A Yes.
5	Q Okay. Now is that conventional digital
6	circuitry and/or software what comes to your mind when
7	you as a structure that can perform the stated
8	function?
9	A Yes, I think that's what would come to someone
10	skilled in the art.
11	Q And is it correct that the language of the
12	claim itself expressly identifies that structure?
13	A Well, it uses the word "compression means,"
14	which identifies some sort of structure. And it tells
15	you the function, which is a standard compression. So
16	we know from that that we're talking about some sort of
17	standard compression step.
18	Q But it doesn't tell you what particular
19	structure would perform that step?
20	A It doesn't limit to one particular structure,
21	no.
22	Q Okay. And can you give me an example of a
23	structure that would perform the stated function of this
24	claim element that would not fall within the categories
25	you give at the end of paragraph 92, the conventional

1	algorithm, would be describing it to someone skilled in
2	the art as either hardware or software. So when we talk
3	about the controller, say, or 27 or the
4	compressor/decompressor 26, the controller 33, aspects
5	of them could all certainly be either hardware or
6	software.
7	Q (BY MR. LEWIS) And you are applying your
8	understanding as one of skill in the art?
9	A Yes.
10	Q But are you describing what's actually
11	discussed in the patent, or how one of skill in the art
12	could implement it?
13	A Well, as I tried to say, whatever the patent
14	discusses some just logical operation. So, for
15	instance, in with regard to say the compression one,
16	in column 5 line say at lines 8 through 24 they
17	describe a logical compression algorithm. There is no
18	hardware or software being mentioned. It's just the
19	logical steps you would take in order to do the
20	compression there.
21	And so when we're talking about just logical
22	steps one skilled in the art would understand that there
23	is software implementations and hardware implementations
24	of that.

Is the AMD 7971 a piece of software?

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Q

1	Q Okay. And is it your belief that the system
2	disclosed in the Burst patents is a computer?
3	A Is a computer?
4	Q Uh-huh.
5	A Well, I guess I'll go back to my earlier
6	question earlier to you which is, what do you mean by
7	computer? Do you mean a microcontroller, or do you mean
8	a general purpose desktop workstation?
9	Q Let's take a general purpose desktop computer.
10	A The Burst invention is not a general purpose
11	workstation. It can be implemented using a general
12	purpose workstation, but it certainly is not a general
13	purpose workstation.
14	Q So in other words what's described in the
15	patents is not a general purpose computer, right?
16	A It could be implemented with a general purpose
17	computer but it is not a general purpose computer.
18	Q I'm just trying to understand what you mean by
19	that. In other words, it could be implemented with a
20	general purpose computer in that you could put together
21	a different system that would be a general purpose
22	computer.
23	A No, no. It's, you know the reason why it's
24	called a general purpose computer is that you can build
25	things, you can use it for a bunch of different things.

How did I determine what, that the --1 A 2 Q That it's not a means-plus-function limitation 3 for that reason. 4 Well, there were several well-known random 5 access storage means at the time of the '992 patent --6 '995, excuse me. 7 And so you read the function in the element and Q 8 provided structures that were known to one of skill in the art that could perform that function? 9 10 A Correct. 11 And it's not your testimony then that the 12 language of the claim element recites a particular 13 structure, is it? 14 Α Well, I mean there is, it says "random access 15 storage." And that sounds like structure to me. And it 16 describes the function which is storing, well, look at 17 the whole thing. But it's, well, storing basically is 18 the function. So that, you know, yes, that by itself 19 told me, you know, the type of structures that one would 20 know. 21 Q And a random access storage is not a particular 22 type of structure, is it? 23 A particular type of structure? I mean --A 24 Q A particular structure. 25 Α There are several types of structures that can

1	perform that function.
2	Q Okay. What let's refer back to the claim
3	charts, Exhibit 8 to start with. What structure
4	corresponds to the random access storage means in claim
5	1 of the '995 patent?
6	A Look at pages 14 through 16 you'll see where I
7	detail that.
8	Q Okay. And what are those structures?
9	A They talk about various DRAM and SRAM, dynamic
10	RAM and static RAM, structures. And they give examples
11	of particular chips, such as the TMX4C1024, and then the
12	NMOS IMS1203.
13	Q Okay. Any other structures disclosed as
14	corresponding to the random access storage means?
15	A They also disclose a CMOS, which is a type
16	semiconductor manufacturing process memory.
17	Q Would a CMOS be either DRAM or SRAM?
18	A It could be.
19	Q Well, could it be something else?
20	A I don't know. I would have to look back at the
21	art at that time.
22	Q But as you sit here now you don't believe it
23	could be anything else?
24	A I don't recall anything else.
25	Q All right. Any other structures that

1 correspond to the random access storage means? 2 It seems they mention the optical disk 3 memories. 4 What page are you on? Q 5 A Page 15. 6 0 I see. Is an optical disk memory a random 7 access memory? 8 A Yes. Any other structures corresponding to the 9 10 random access storage means? 11 I think that's all I see. 12 Okay. Let's move on to next claim then, next Q 13 pertinent claim? 14 I don't think -- for this one I'm fairly 15 confident that any other random access storage means for 16 types of the same structures. 17 Q Okay. 18 Α If you want to go through them we can, but --19 No, all I want is your opinion. If you're Q 20 willing to give it based on your recollection that's 21 fine. 22 Α Yes. 23 Should we take a look at the '705 patent then, Q 24 claim 1? 25 I think we're going to find the same Α

1 Do you see that? 2 A Yes. 3 Q Okay. Is it correct that you opined in that sentence based on your understanding as one of skill in 4 the art of how one could perform the function stated in 5 6 the output means element? 7 Well, I tried to express the idea that someone A skilled in the art would understand the structure for 8 9 doing that function, yes. 10 In other words, someone of skill in the art 11 would understand you could use this kind of structure? 12 Α Correct. 13 Q Am I also correct then that the output means 14 claim element itself does not provide a particular 15 structure to perform the stated function? 16 I always have a little bit of difficulty with 17 that, because it's clearly, you know, after having -- I 18 read the output means certainly after, you know, soon 19 after reading the patent. And certainly I got ideas 20 from the patent that immediately invoked, you know, 21 those structures. But whether the language by itself 22 tells you anything -- I mean it's just an output for 23 digital signal. So that's all you need to know. 24 But the language of the claim itself doesn't Q 25 provide or doesn't identify, rather, a particular

1 time if you create the appropriate time compressed 2 representation. 3 0 (BY MR. LEWIS) But that's not actually in the patent, right? Well, it sets up a couple hypotheticals to explain how -- it doesn't try to cover every single 6 possible, you know, use of the device. It just tries to 7 explain how different circumstances you get different 8 9 results. And I think in the example of where you 10 transmit less than real time, it uses the modem as an 11 example. 12 0 Okay. But it never uses the modem as an example of transferring faster than real time within the 13 14 four corners of the '995 patent? 15 Α Not that I recall. 16 Q Okay. Let's move to the '705 patent then. 17 Actually no. 18 Let me ask you, in the '995 patent does the 19 output means -- the structure corresponding to the 20 output means vary in the different claims? 21 Α In claim 17 it has the same meaning. 22 Okay. I think the next independent is 30. Q 23 Actually, no, that might be wrong. Whatever the next 24 independent claim is, what corresponds to the output 25 means in that claim?

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look at something like claim 7 it takes, it says, "said transmission means" and it limits it further than the more general structure. And it says, "Said transmission means of at least one of said plurality of audio/video transceivers include a fiberoptic output port." So that calls out one of those particular structures for the claim 7. So it narrows down the general --Q Right, correct. Α Okay. Anything else on the transmission means? Q No. No, I don't believe so. On the Okay. Let's move to the editing means. Q sentence that overlaps pages 30 and 31 of your rebuttal report you state, "I do not believe this to be a means-plus-function limitation as it immediately invokes in the mind of one of ordinary skill in the art conventional digital circuits and/or software for editing audio/video information." A Yes. Is that opinion in that sentence based on your knowledge as one of skill in the art of structures that could perform the stated function of the editing means? Yes. And is it correct that your opinion is not Q based on a particular structure called out in the

editing means element? 1 Α It describes a logical operation 2 Correct. 3 which one skilled in the art would understand could be 4 done with either digital hardware or software. 5 Let's take a look at the '995 patent and the 6 structure corresponding to the editing means. Would you 7 tell me for -- claim 2 is the first claim that it 8 appears? 9 A Yes. 10 Okay. And what is the structure corresponding 11 to claim 2? 12 Α It points out a CPU with some software and a 13 controller. 14 Q What page are you on? 15 Α Page 20. 16 Q Okay. So the corresponding structure is what again? I'm sorry. 17 18 A CPU with some software. 19 Is the ROM read-only memory 32 on page 20 also Q part of the structure that corresponds to the editing 20 21 means? 22 So that's storing the software that would A 23 be run by the CPU in this case. 24 Q Okay. Any other structures correspond to the 25 editing means?

1	A Well, it could also contain the controller 32.
2	Q You've got 32 for two elements there. Is that
3	a
4	A That might be a typo from
5	Q Well, we can just use the names, if you like.
6	One's a controller and one's a ROM, right?
7	A Yes, yes.
8	Q Okay. So they both so the structure
9	corresponding to the editing means is the CPU 31, the
10	ROM, and the controller?
11	A The controller should be listed as 33, I
12	believe.
13	Q Okay. And anything else correspond to the
14	editing means?
15	A Well, there is a piece of software in there
16	that I believe is included that I considered part of the
17	structure.
18	Q Okay. And the structure requires all four
19	components, the CPU 31, the ROM 32, the controller 33,
20	and the piece of software you referred to?
21	A No.
22	Q Okay. So what is what would be structure
23	sufficient to perform the functions of the editing means
24	then?
25	A The CPU and the software.

1	A Well, I think that would be one place you could
2	store it.
3	Q Let me refer you to the next page towards the
4	end. There is a big paragraph, you see the little
5	paragraph that's a quote from the '995 patent?
6	A Yes.
7	Q Does that refresh your recollection as to where
8	the program is stored in the disclosure of the '995
9	patent?
10	A Yes. So it says there it's stored in the ROM.
11	Q And do you have a recollection that the editing
12	program is stored anywhere else in addition to the ROM
13	in the '995 patent?
14	A No.
15	Q Any other structure corresponding to the
16	editing means in claim 2?
17	A They talk about a user interface control panel
18	on 14.
19	Q Okay. What does that do?
20	A It allows you to interface with the software.
21	Q So that's a necessary that's necessary for
22	the editing it's necessary for the editing to be able
23	to tell the software what to do?
24	A No.
25	Q So is that a structure that is, that is the
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0 Okay. Let's move to the next element. 31, paragraph 102, do you see where at the end of that paragraph it says, "I do not believe this to be a means-plus-function limitation as it immediately invokes in the mind of one of ordinary skill in the art conventional analog-to-digital converter circuits." Is that opinion based upon your understanding of what structure could perform the function stated for this element? Yes. Α Does the element itself provide you a particular structure to perform the stated function? Α Well, an analog-to-digital converter is a well-known structure. Q Why don't we take a look at the claim chart and you can tell me what structure corresponds to the analog-to-digital converter means. Α Do you know what claim it first appears in? MR. YORIO: Claim 8. MR. LEWIS: Do you have a page, Mr. Yorio? MR. YORIO: I think it's --THE WITNESS: 27. MR. YORIO: Page 27. MR. LEWIS: Okay. THE WITNESS: It cites to the analog-to-digital

1 Yes. Α Is it correct that your opinion in that 2 Q sentence is based on your understanding of one of skill 3 in the art of structure that could perform the stated 4 function in this element? 5 6 Α Yes. 7 0 Is it correct that this element does not 8 identify a particular structure to perform the stated 9 function? I believe it invokes in the minds of someone of 10 ordinary skill a structure, but it doesn't call out the 11 12 specific particular one. 13 Q Why don't we take a look at the claim chart for 14 the '90 -- sorry, the '995 patent. 15 We can do it if you want, but it's going to be the same. The way, the way that Burst patent describes 16 17 it it's the same structures that were part of the 18 compression means. It describes the same structures 19 that do -- performing compression and decompression. 20 0 And that's true of both the '995 and '705 21 patents? 22 So whatever we identified for the 23 compression means in the respective claims would be also 24 true for the decompression means. 25 Q Is the 7971 chip capable of decompressing

1 Okay. Am I also correct then that the claim Q element itself does not identify a particular structure 2 3 to perform the stated function? 4 It doesn't try to call out the single 5 particular structure. 6 Why don't we look at the claim charts for the '995 patent. And if you would tell me what structure 7 corresponds to the recording means. 8 Do you by chance know where the recording means 9 A first shows up in the claim language? 10 11 No, but I really wish I did. Let me -- why don't we take a look at page 40 and the recording 12 removable -- sorry. The recording means in claim 44. 13 Would you identify for me the structure corresponding to 14 15 the recording means. 16 Is it correct that claim 44 in your claim chart doesn't identify any structure and just refers up to 17 18 claim 1? 19 Yeah, I'm wondering if there is some sort of a mistake. Because there is definitely a structure that's 20 called out in the patent that's removable recording 21 22 medium. 23 And it's correct that claim 1 does not include 24 such an element, right? 25 Α That's why I'm wondering why there is a Right.

1	cite like that.
2	A I think I had some sort of editing mistake.
3	Q Okay. You want to move onto claim 36, perhaps
4	that will help you, page 74.
5	A Yeah, that's the sort of cite I expected.
6	Q So what are the structures in claim 36 that
7	correspond to the recording means?
8	A A CD ROM.
¹ 9	Q Anything else?
10	A Optical disks, a worm.
11	Q CD ROM is an optical disk, isn't it?
12	A Yes, it's one form of optical disk.
13	Q Any other structures?
14	A A magnetic tape format.
15	Q Anything else?
16	A No, I believe that's it.
17	Q The corresponds to the recording means?
18	A I believe that's it.
19	Q Okay. In the '705 patent
20	A And that would be the same for that previous
21	claim. That seems to have the typo in it.
22	Q Okay.
23	A Whichever claim that was.
24	Q Claim 44, you mean, on page 40?
25	A Yes, correct.
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1 Your testimony is that the recording means in 0 2 claim 44 has the same structure as in --3 MR. YORIO: Claim 36. Q (BY MR. LEWIS) Claim 36? 5 To kind of fix up my charts I would 6 change page -- the language on claim 40 to say, see claim 1 and 2 above, I would say see claim 36 instead. 7 8 Okay. How about the '705 patent. Is there any Q 9 structure corresponding to the recording means that's different to what you just testified about? I think 10 11 it's claim 36 again. Or not again. 12 Woops, I'm sorry. I think I sent you out to 13 the wrong claim. I'm sorry. 14 Actually is there a recording means in the '705 15 patent? 16 I don't recall. I don't see one in this chart. Α 17 I don't think there is. Okay. All right. 18 When were you hired by Burst.com, 19 approximately? 20 I recall a meeting with Burst lawyers, and it A 21 would have been in January, because I was in town for a 22 conference that I attend every year in January. And I 23 don't believe it was last year, I believe it was 24 probably the year before. 25 Q So it was January of '01 or '02? You mean two

reading in the area I didn't know of anyone who had attempted to do that. And then certainly when I read the patents and the file history and cited prior art, you know, and mentioned that sort of idea.

0 What sort of idea?

A This general concept I'm trying to -- I tried to explain there. Not that this is the entire invention, but this is one of the, one of the kind of key concepts that's being expressed.

Q So you are saying that nobody had used data compression in a sufficiently-sized channel to transmit data in less time than it took to capture or view the data before Mr. Lang?

A Well, I don't know I'd go that far. But in terms of the apparatus and the, you know, and everything that, you know, the system he put together, yes, I think that's true. This is kind of a -- I'm trying to maybe do what you asked before. Try to give you a broad stroke overview of some of the important aspects. And that's certainly one of the important aspects, but it's not the only aspect of the invention.

Q So you understand the Burst patents to be towards a specific apparatus and method of performing faster than real time transmission?

A Correct, that's the -- that's what the claims,

1 ... make a claim of. Do you believe that Richard Lang invented the 2 Q idea of using transmission faster than real time? 3 I think he invented, you know, the stuff that's ascribed in the patents. And one of those concepts, you 5 know, including one of the important concepts, is this 6 idea. Whether he was the first one ever to think of 7 that concept, I don't know. I don't know why it's 8 relevant. 9 10 So the answer is you don't know? I haven't tried to find out. 11 Okay. Have you seen Microsoft's mediation 12 Q briefs? 13 I don't know if I've seen all of them. 14 Α seen at least one or two of them. I don't know how many 15 16 there are, so --17 Microsoft's briefs? 18 Α Yes. Are you in any way relying on anything you 19 Q 20 learned in there to help you form your opinion? 21 No. I read them more to -- so I could 22 understand what points to explain, try to explain more I mean these sort of things I could spend, you 23 24 know, three, 400 pages describing every nuance of the 25 invention. But there is usually a couple of key things

CERTIFICATE OF REPORTER

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I, DIANE M. WINTER, a Certified Shorthand Reporter, hereby certify that the witness in the foregoing deposition was by me duly sworn to tell the truth, the whole truth and nothing but the truth in the within-entitled cause;

That said deposition was taken down in shorthand by me, a disinterested person, at the time and place therein stated, and that the testimony of the said witness was thereafter reduced to typewriting, by computer, under my direction and supervision;

That before completion of the deposition, review of the transcript was not requested. If requested, any changes made by the deponent (and provided to the reporter) during the period allowed are appended hereto.

I further certify that I am not of counsel or attorney for either or any of the parties to the said deposition, nor in any way interested in the event of this cause, and that I am not related to any of the parties thereto.

DATED: December 18, 2003